

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015429**Date Inspected:** 05-Jul-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Li Yang

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

This QA Inspector observed ZPMC welder Mr. Zhou Pan, stencil 220063 was using flux cored welding process to make temporary tack welds between OBG segment 9BE bottom plate and a temporary alignment plate. This temporary plate was being installed to allow ZPMC to align various weld joints between OBG segments 9BE and 9CE near panel points PP76 and PP77. This QA Inspector observed the base material adjacent to where a tack weld did not appear to have been preheated and that the base material appeared to be at an ambient temperature. This QA Inspector informed ZPMC QC Inspector Mr. Zhu Yuan, who was near to where this welding had taken place that the base material did not appear to have been preheated. ZPMC CWI Mr. Li Yang was also informed of this situation and he informed this QA Inspector that the tack welds will be ground off and after the base material is preheated that new tack welds will be installed. Items observed on this date do not appear to fully comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Dai Lu, stencil 048659 was using shielded metal arc procedure

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WPS-345-SMAW-4G(4F)-FCM-Repair to make repair weld OBE9-007 as directed by weld repair WR-13914. This weld joins the bottom plates between OBE segment 9BE and 9CE. This QA Inspector observed the welding electrodes are being stored in a portable rod oven which is connected to an electric power cable. This QA Inspector observed ZPMC has electric heaters installed on the opposite side of where this welding is taking place. This QA Inspector measured a welding current of approximately 150 amps and Mr. Dai Lu appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

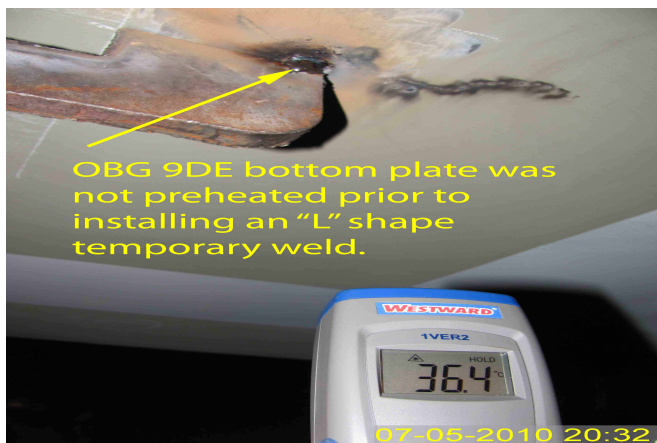
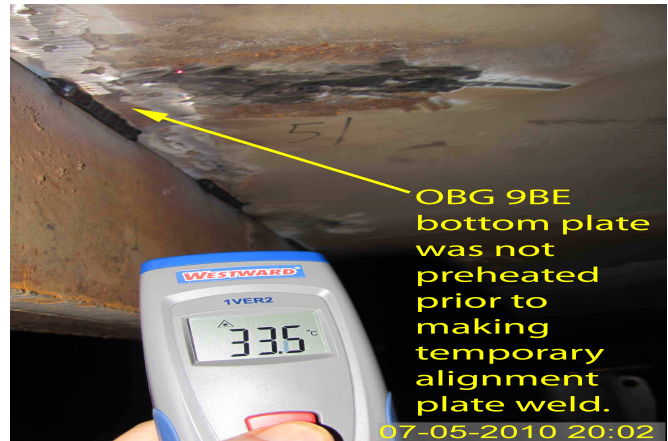
This QA Inspector observed ZPMC welder Mr. Chen Zheng Hua, stencil 220067 is using shielded metal arc welding process to tack weld an "L" shaped temporary plate to OBG segment 9DE near panel point PP81. This temporary plate will be used to hold Cross Beam CB12 bottom plate in place while it is initially installed into the segment. This QA Inspector observed the base material adjacent to where this weld had been made appears to be at an ambient temperature and that the location where this weld was made does not appear to have had the paint removed from the base material. This QA Inspector informed ZPMC CWI Mr. Li Yang that the base material did not appear to have been preheated and that the paint had not been removed prior to welding. Mr. Li Yang informed this QA Inspector that the tack welds will be ground off and after the base material is preheated that new tack welds will be installed. This QA Inspector observed ZPMC personnel removing the tack welds, and after ZPMC preheated and ground the base material Mr. Chen Zheng Hua welded temporary "L" shaped plates at other locations. Items observed on this date do not appear to fully comply with applicable contract documents. See the photographs below for additional information.

Later in the shift this QA Inspector observed ZPMC welder Mr. Chen Zheng Hua was using shielded metal arc welding process to tack weld an "L" shaped temporary plates to OBG segment 9DW near panel point PP81. The temporary plates were welded to the top sides of Cross Beam CB12 bottom plate and steel wedges were used to lift the bottom plate in place prior to drilling bolt holes into the bottom plate. This QA Inspector observed locations where these welds were made have been ground to remove loose paint and rust, the base material adjacent was preheated and ZPMC QC was monitoring this welding. This QA Inspector observed a welding current of approximately 160 amps and that the welding electrodes were being stored in a heated electrode storage container that was connected to an electric power supply. Items observed on this date appeared to comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Li Gui Min, stencil 220069 was using flux cored welding procedure WPS-345-FDAW-3G(3F)-Repair to make repair welds on longitudinal diaphragm LD18C in OBG segment 9CE near panel point PP77 as directed by weld repair document B-WR13818. This QA Inspector observed that Mr. Li Gui Min appears to be certified to make this weld, ZPMC CWI Mr. Li Yang is monitoring the welding and the base material had been preheated with a torch. Items observed on this date appeared to generally comply with applicable contract documents

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Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
